WHAT IS CLAIMED IS:

1. An auxiliary supporting unit for a boarding bridge, wherein the auxiliary supporting unit is respectively mounted under two ends of a beam of a wheel mechanism of the boarding bridge, the auxiliary supporting unit including a leg support and a foot portion, the first end of the leg support being connected to the beam and the second end of the leg support being connected to the foot portion, whereby the foot portion is movable on or slightly above the ground to provide auxiliary support to the beam and the boarding bridge thereon.

2. The auxiliary supporting unit as claimed in claim 1, wherein the foot portion is a universal wheel.

3. The auxiliary supporting unit as claimed in claim 2, wherein a buffer is further provided between the leg support and the foot portion.

4. The auxiliary supporting unit as claimed in claim 2, wherein a manual mechanism is provided for driving the foot portion.

5. The auxiliary supporting unit as claimed in claim 1, wherein a power-driven thruster having a fixed part and a moving part is provided for driving the foot portion.

6. The auxiliary supporting unit as claimed in claim 5, wherein the foot portion is configured into a supporting seat.

7. The auxiliary supporting unit as claimed in claim 5, wherein the foot portion is a universal wheel.

8. The auxiliary supporting unit as claimed in claim 6, wherein the leg support is connected to the supporting seat via a hinge.

9. The auxiliary supporting unit as claimed in claim 5, wherein the power-driven thruster is a hydraulic cylinder or an electrical thruster.

10. A boarding bridge, comprising:

a tunnel disposed above a beam, the first end of the tunnel being connected to a boarding gate of an airport and the second end of the tunnel being connected to an exit of an airplane;

an elevator system provided at the another end of the tunnel being connected to the exit of the airplane;

a wheel mechanism provided with

a beam, a supporting unit composed of a revolving base, a hinge support and a hinge shaft being provided thereon;

wheels, attached to the supporting unit and rotating relative to the revolving base;

a control system, for controlling the moving direction of the wheels and the lifting of the elevator system; wherein the boarding bridge further comprising:

an auxiliary supporting unit, defined under two ends of the beam and provided with a leg support and a foot portion, the first end of the leg support being connected with the beam and the second end of the leg support being connected with the foot portion, the foot portion being movable on or slightly above the ground to provide an auxiliary support to the beam and the boarding bridge thereon.

11. The boarding bridge as claimed in claim 10, wherein the foot portion is a universal wheel, the first end of the leg support is mounted under the beam and the second end of the leg support is connected to the universal wheel.

12. The boarding bridge as claimed in claim 11, wherein a buffer is further provided between the leg support and the foot portion.

13. The boarding bridge as claimed in claim 10, wherein the leg support is a

power-driven thruster, which has a fixed part mounted under the beam and a moving part connected to the foot portion.

14. The boarding bridge as claimed in claim 13, wherein the foot portion is configured into a supporting seat.

15. The boarding bridge as claimed in claim 13, wherein the foot portion is a universal wheel.

16. The boarding bridge as claimed in claim 14, wherein the moving part of the power-driven thruster is connected to the supporting seat via a hinge.

17. The boarding bridge as claimed in claim 13, wherein the power-driven thruster is a hydraulic cylinder or an electrical thruster.

18. The boarding bridge as claimed in claim 15, wherein an angle detector is in coaxial connection with the bearing assembly for measuring an angle of wheel mechanism turned relative to a longitudinal axis.

19. The boarding bridge as claimed in claim 12, wherein the foot portion is driven to extend to be supported on the ground with a pressure by adjusting the leg support of the auxiliary supporting unit.

20. A method for controlling the boarding bridge as claimed in claim 10, comprising steps of:

1) providing a wheel mechanism, which has a beam on which a supporting unit including a revolving base, a hinge support and a hinge shaft is provided; and wheels attached to the supporting unit and rotating relative to the revolving base, used for driving the boarding bridge;

2) providing a tunnel disposed on the beam, for connecting a boarding gate with an exit of an airplane;

3) providing an elevation system for lifting the tunnel to connect with the exit of the airplane;

4) providing a control system for controlling the moving direction of the wheel mechanism and the lifting of the elevation system; and

5) providing an auxiliary supporting unit, mounted under two ends of the beam, the auxiliary supporting unit comprising a leg support and a foot portion, a first end of the leg support being connected to the beam and a second end of the leg support being connected to the foot portion; whereby the foot portion of the auxiliary supporting unit is movable on or slightly above the ground to provide an auxiliary support to the boarding bridge by adjusting the leg support under the control of the control system so as to balance torsion forces of the boarding bridge when the boarding bridge is moving.

21. The method for controlling the boarding bridge as claimed in claim 20, wherein in the step 5), the foot portion of the auxiliary supporting unit is a universal wheel.

22. The method for controlling the boarding bridge as claimed in claim 21, wherein in the step 5), a buffer is further provided between the leg support and the universal wheel, whereby the foot portion of the auxiliary supporting unit is supported on the ground to provide an auxiliary support to the boarding bridge by the buffer so as to balance torsion forces of the boarding bridge when the boarding bridge is moving.

23. The method for controlling the boarding bridge as claimed in claim 20, wherein in the step 5), the leg support of the auxiliary supporting unit is a power-driven thruster, and the foot portion is a supporting seat, whereby when the boarding bridge moves to connect with the boarding gate of the airplane, the supporting seat is driven by the power-driven thruster to extend to support on the ground in a given pressure, so as to provide an auxiliary support to the boarding bridge, and when the boarding bridge needs to move again, the

supporting seat is retracted by the power-driven thruster under the control of the control system to the original status.

24. The method for controlling the boarding bridge as claimed in claim 20, wherein in the step 5), the leg support is a power-driven thruster and the foot portion is a universal wheel, whereby the universal wheel driven by the power-driven thruster extends to be supported on the ground under the controlling of the control system in a given pressure, so as to balance torsion forces of the boarding bridge during the moving of the boarding bridge and make the boarding bridge stable.

25. The method for controlling the boarding bridge as claimed in claim 21, wherein in the step 5), an angle detector is provided on the beam to measure an angle of the wheels relative to a longitudinal axis of the boarding bridge and send the detected angle signal to the control system of the boarding bridge, whereby the leg support is driven to extend or retract by the power-driven thruster in a given pressure under the controlling of the control system in response to the detected angle signal.

26. The method for controlling the boarding bridge as claimed in claim 25, wherein when the detected angle is lager than a first predetermined value α, the foot portion is driven by the power-driven thruster under the controlling of the control system of the boarding bridge to extend out to be supported on the ground in a given pressure so as to increase the stability of the boarding bridge; when the detected angel is smaller than a second predetermined value β, the foot portion is driven by the power-driven thruster to retract to its original status; and when the detected angle is larger than the second predetermined value β and smaller than the first predetermined value α, the power-driven thruster is idle under the control of the control system of the boarding bridgefurther comprising the step of providing a power-driven mechanism in order to drive the leg support to extend or retract.

27. The method for controlling the boarding bridge as claimed in claim 26, wherein the first predetermined value α is larger than the second predetermined value β.